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Indian Standard

RECOMMENDATIONS FOR
APERTURE SIZE OF SIEVES FOR
SEED CLEANERS

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INDIAN STANDARDS INSTITUTION
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NEW DELHI 110002

Indian Standard

RECOMMENDATIONS FOR APERTURE SIZE OF SIEVES FOR SEED CLEANERS

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*Dr M. M. Verma acted as the Chairman at the meeting in which this document was finalized.

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Indian Standard
**RECOMMENDATIONS FOR
APERTURE SIZE OF SIEVES FOR
SEED CLEANERS**

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 31 May 1984, after the draft finalized by the Seed Technology Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 Various aperture sizes in sieves of seed cleaners are used in the country. It is hoped that this recommendation would help in adoption of uniform sieve sizes.

0.3 The conventional designation and use of aperture sizes of sieves has been in terms of fraction of an inch. Since such sieves are also being used, these have been included in equivalent millimetres computed to the second place of decimal and has been given in paranthesis. These sizes would be considered for deletion after the sieve manufacturers adopt rational metric values.

0.4 In preparation of this standard, assistance has been derived from National Seeds Corporation Ltd, New Delhi.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test, shall be rounded off in accordance with IS:2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard covers recommended aperture sizes of sieves for seed cleaners.

2. SIZES

2.1 Recommended aperture sizes are given in Table 1.

*Rules for rounding off numerical values (*revised*).

2.2 The dimension of aperture size as given in Table 1 is in millimetres. The shape of apertures are round, oblong and rectangular. In round aperture, dimensions indicate the diameter of perforation. In oblong aperture, the dimensions indicate width and length of the perforation respectively. In wire mesh, the dimensions indicate number of perforations in 25 mm length and 25 mm width of wire mesh respectively.

TABLE 1 RECOMMENDED SIEVE SIZES

(Clause 2.1)

| SL No. | NAME AND TYPE OF SEED | APERTURE SIZES, IN mm (See NOTES 1 & 2) | |
|-----------|---|---|-------------------------------|
| | | Top | Bottom |
| (1) | (2) | (3) | (4) |
| 1. Maize | | | |
| | a) <i>Hybrids</i> | | |
| | 1) Ganga Safed-2 Hi-Starch | 11·00, (11·11) | 7·00, (7·14), 7·50, (7·54) |
| | 2) Decan, Decan 101 G-101, Him-123 Ganga-6, Ranjeet | 11·00, (11·11) | 7·00, (7·14) |
| | 3) Ganga-3 | 10·50 (10·72) | (6·75) |
| | 4) Ganga-5 | 10·50, (10·72), 11·00 (11·11) | 7·00, (7·14) |
| | b) <i>Composite and Open Pointed Varieties</i> | | |
| | 1) Jawahar, Vikram, Amber, Kisan | 11·00, (11·11) | 7·00, (7·14) |
| | 2) Vijay | 10·50, (10·72), 11·00 (11·11), (10·72) | 7·00, (6·75), (7·14) |
| | 3) Pop Corn | 8·75, (8·73) | 4·75, 4·25, (6·75) |
| | 4) Sona, Puerto Rico Grade 1 | 10·50, (10·72) | (6·75) |
| | c) <i>Inbreds</i> | | |
| | 1) CM 109, 110, 111, 202, 205, 206, 600, (open pollinated) | 10·50, (10·72) | 6·40, (6·35) |

NOTE 1 — An asterisk (*) with an aperture size denotes oblong holes, a dagger (†) denotes wire mesh sieve, and the rest, without any superscript denotes round hole type sieve.

NOTE 2 — Figures in parenthesis are for the inch series sieves, and given in equivalent millimetres.

(Continued)

TABLE 1 RECOMMENDED SIEVE SIZES — *Contd*

| SL No. | NAME AND TYPE OF SEED | APERTURE SIZES, IN mm (<i>See</i> NOTES 1 & 2) | |
|-----------|---|---|---|
| | | Top | Bottom |
| (1) | (2) | (3) | (4) |
| | 2) CM 103, 104, 105, 112, 113, 114, 115, 201, 300, 400, 500 | 0.50, (10.72) | |
| | Antigua Gr-1; CM 601 open pollinated | | (6.75) |
| | d) <i>Single Crosses</i> | | |
| | 1) CM 109×110, 113×112, 202×201, 202×205 | 10.50, (10.72) | 6.40, (6.35) |
| | 2) CM 104×105, 202×111, 400×300, 115×114, 202×206, 103×104, 201×105, 202×106 | 10.50, (10.72) | (6.75) |
| 2. | Sorghum | | |
| | CSH-1, CSH-5, CSJ-6, CSH-4 & MSCK 604, CK 60 B, MS 2219A, 2219B, IS 84, IS 3691, MS 2077A, 2077B, CS 3541 | 4.75, (4.76) | 3.5, (3.57), 2.1, (2.12×12.7)*, (2.12×19.05)* |
| 3. | Castor | | |
| | NPH-1 | | (5.95), (4.37×12.7)* |
| 4. | Wheat | | |
| | a) Sonalika (HD-1553) | 5.50 (5.56) | 2.1, (1.95×19.05)*, (2.12×19.05)* |
| | b) HD-1982 (Janak), HD-1981 (Pratap), HD-2009 (Arjun) and other varieties of similar seed sizes | 5.50 (5.56) | 1.8, 2.0, (1.95×19.05)* |
| | c) Kalyan Sona, Malvika Raj-911 | 5.50, (5.56) | 2.0, (1.95×19.05)*, (1.95×12.7)* |
| | d) Sharbati Sonara, Safed Larma, Chhote Larma | 5.50 (5.56) | 2.0, 2.1, (1.95×12.7)* (2.12×12.7)*, (2.12×19.05)*, (1.95×19.05)* |

NOTE 1 — An asterisk (*) with an aperture size denotes oblong holes, a dagger (†) denotes wire mesh sieve, and the rest, without any superscript denotes round hole type sieve.

NOTE 2 — Figures in parenthesis are for the inch series sieves, and given in equivalent millimetres.

(*Continued*)

TABLE 1 RECOMMENDED SIEVE SIZES — *Contd*

| SL No. | NAME AND TYPE OF SEED | APERTURE SIZES, IN mm (See NOTES 1 & 2) | |
|--------|--|---|--|
| | | Top | Bottom |
| (1) | (2) | (3) | (4) |
| 5. | Paddy | | |
| | a) IR-8, Jaya, Pusa 2-21, IR-20, Ratna, Improved Sona, IET-1990, RP-4-14 | 2.8, (2.78 × 12.7)* (2.78 × 19.05) | 1.85, (1.81 × 19.05)*, (1.81 × 12.7)* |
| | b) Fine and Superfine varieties | -do- | 1.4, (1.19 × 12.7)* (1.19 × 19.05)* |
| 6. | Soyabean | | |
| | Bragg, Clark-63, Lee, Hill, Hardee Improved Pelien, Punjab No. 1 | 8.0, (7.94), (8.33) | 4.0, (3.97 × 19.05)* |
| 7. | Bajra | | |
| | a) HB-1, Tift 23A, 23B, HB-3, HB-4, Tilt 23D2A, Double Dwarf Tift 23D2B | 3.25, (3.18) | 1.3, 1.6 (1.27 × 19.05)* |
| | b) J10-4, KS 60, Bi 13-B | 3.25, (3.18) | 1.9, 1.4, 1.98 (1.41 × 19.05)* |
| 8. | Jute | | |
| | a) Capsularis | 2.4, (2.38) | 1.60, (1.19) |
| | b) Olitorius | 2.0, 2.4, (1.98), (2.38) | (0.79) |
| 9. | Barseem | | |
| | a) Diploid | 1.9, 2.4, (1.98), (2.38) | (26 × 26)† |
| | b) Tetraploid | 2.4, (2.38) | 1.2, (1.19 × 12.7)* |
| 10. | Cowpea | | |
| | a) Fodder | | |
| | EC-4216, Type-2 | 7.0, (7.14) | 3.5, 1.2, (3.57 × 19.05)* |

NOTE 1 — An asterisk (*) with an aperture size denotes oblong holes, a dagger (†) denotes wire mesh sieve, and the rest, without any superscript denotes round hole type sieve.

NOTE 2 — Figures in parenthesis are for the inch series sieves, and given in equivalent millimetres.

(Continued)

TABLE 1 RECOMMENDED SIEVE SIZES — *Contd*

| Sl. No. | NAME AND TYPE OF SEED | APERTURE SIZES, IN mm (See NOTES 1 & 2) | |
|------------|--|---|------------------------------------|
| | | Top | Bottom |
| (1) | (2) | (3) | (4) |
| | b) <i>Vegetable</i> | | |
| | Pusa Barsati | (5.95) | (3.97) |
| | Pusa Phalguni | (5.95) | (3.18 × 19.05)* |
| 11. | Oat | | |
| | Kent & Algerian | (8.73) | (1.81 × 19.05)*, (1.81 × 12.7)* |
| 12. | Lucerne | | |
| | Type-9 | (2.38) | (26 × 26) † |
| 13. | Hemp/Mesta | (4.76) | (2.12 × 19.05)* |
| 14. | Moong/Green Gram | | |
| | Pusa Baisakhi, S-8, PS 7, PS 10, PS-16 | (5.16) | (3.18 × 19.05)* (2.78 × 19.05)* |
| 15. | Cotton | | |
| | a) Acid delinted | (7.14) | (3.97 × 19.05)* |
| | b) Fuzzy | (14.29) | 7.00, (5.16 × 19.05)* |
| 16. | Peas | | |
| | Palse type T-163 | 10.5, (10.72) | (6.75) |
| 17. | French Bean | (11.00, (11.11) | 4.75, (4.76 × 19.05)* |
| 18. | Okra (Bhindi) | 6.00, (5.95) | 4.35, (4.37) |
| 19. | Cluster Bean (Guar) | | |
| | PNB - (Veg), FS - 277 (Fodder), Pusa Sona | (5.95) | (1.81 × 19.05)* (1.81 × 12.7)* |
| 20. | Bottlegourd | | |
| | PSPL & PSPP, Bittergourd | 11.00, (11.11) | (6.35), 6.5 |
| 21. | M.P. Chari, Pusa Chari | — | 2.1 |

NOTE 1 — An asterisk (*) with an aperture size denotes oblong holes, a dagger (†) denotes wire mesh sieve, and the rest, without any superscript denotes round hole type sieve.

NOTE 2 — Figures in paranthesis are for the inch series sieves, and given in equivalent millimetres.

(Continued)

TABLE 1 RECOMMENDED SIEVE SIZES — *Contd*

| SL No. | NAME AND TYPE OF SEED | APERTURE SIZES, IN mm (See NOTES 1 & 2) | |
|--------|--|---|--|
| | | Top | Bottom |
| (1) | (2) | (3) | (4) |
| 22. | Bengal Gram 130, C-214, 4110, H-208 | — | 5.5, (5.56) |
| 23. | Black Gram (Urd) B-1, Type 9, PS-16 | — | (2.78 × 19.05)* |
| 24. | Sunflower EC 68414, EC 68415, EC 69874 | (10.32) | (4.76) |
| 25. | Tommato, Chillies, Brinjal | 4.0, (3.97) | 2.0, (2.12) |
| 26. | Onion P-R | (3.97) | (2.12) |
| 27. | Cauliflower | 3.25, (3.18) | 2.4*, (1.4 × 19.05)* |
| 28. | Methi Kesari | (2.12), 2.1 | (26 × 26)† |
| 29. | Methi Early Bunching | 3.25, (3.18) | (1.19 × 7.94)* |
| 30. | Spinach | 5.5, (5.56) | 1.85, (1.81 × 19.05),* (1.81 × 12.70)* |
| 31. | Dolichos | (8.73) | 4.75, (4.76 × 19.05)* |
| 32. | Carrot | — | (26 × 26)†, (26 × 28)† |
| 33. | Water Melon | 6.0, (6.35) | 1.85, (1.81 × 19.05)*, (1.81 × 12.70)* |
| 34. | Turnip | (1.81) | (1.27) |
| 35. | Raddish-Japanese Raddish Brwt & PK | (3.97) (3.97) | 1.85, (1.81 × 19.05),* (1.81 × 12.70)* (1.41 × 19.05)* |
| 36. | Sponges Gourd | 9.5, (9.53) | 6.4, (6.35) |
| 37. | Knol Kohl, Cabbage | (2.78) | (1.19 × 7.94),* (1.21 × 19.05),* (1.27 × 19.05)* |
| 38. | Sugar Beet | (7.94) | (3.17) |
| 39. | Musk Melon, Cucumber JIG | (7.94) | (3.57) |
| 40. | Lettuce Chinese, Yellow and Great Lakes | (1.81) | (1.27) |

NOTE 1 — An asterisk (*) with an aperture size denotes oblong holes, a dagger (†) denotes wire mesh sieve, and the rest, without any superscript denotes round hole type sieve.

NOTE 2 — Figures in paranthesis are for the inch series sieves, and given in equivalent millimetres.

INDIAN STANDARDS ON SEED TECHNOLOGY

IS:

| | |
|------------|--|
| 3866-1966 | Specification for sugarcane seed material |
| 4932-1979 | Code for production of mangografts (<i>first revision</i>) |
| 5733-1979 | Code of production of grafts of apples (<i>first revision</i>) |
| 6671-1972 | Specification for germination paper |
| 6705-1972 | Specification for sand used in germination tests |
| 7838-1975 | Glossary of terms for ornamental trees and shrubs |
| 8256-1976 | Code for production of nursery stock for citrus fruits |
| 8663-1977 | Guidelines for production of nursery stock for bamboos |
| 8675-1977 | Specification for nursery stock-budded roses |
| 10892-1984 | Recommendation for aperture size of sieves for seed cleaners |

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